COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Tidewater Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS
Permit Effective Date: June 1, 2006

Cogentrix Virginia Leasing Corporation
Portsmouth, Virginia
Permit No. TRO-61049

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Cogentrix Virginia Leasing Corporation has applied for a Title V Operating Permit for its Portsmouth facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date: May 30, 2006

Air Permit Manager:_____ Date: May 30, 2006

Deputy Regional Director:_____ Date: May 30, 2006

FACILITY INFORMATION

Permittee
Cogentrix Virginia Leasing Corporation
1 Wild Duck Lane
Portsmouth, Virginia 23703

Facility
Cogentrix - Portsmouth
1 Wild Duck Lane
Portsmouth, Virginia 23703

County-Plant Identification Number: 51-740-00081

SOURCE DESCRIPTION

NAICS Code: 221122 – Fossil Fuel Electric Power Generation
Cogentrix Virginia Leasing Corporation is a cogeneration plant which combusts bituminous coal in six (6) stoker-fired boilers, each rated at approximately 200 million Btu heat input per hour, to produce steam. A portion of the steam is sold to an industrial host for use in their manufacturing process. The remainder of the steam is used to drive a turbine-generator to provide electricity that is sold to Virginia Power. The plant was originally permitted under the requirements of PSD in 1986. The boilers are traveling grate, overfeed, stoker boilers manufactured by Foster Wheeler and are normally operated at full load, 24 hours per day, 7 days per week. In addition to the stoker boilers, other emission sources on the plant site include the coal handling operations and the ash handling operations. Coal is delivered to the site via barge and off-loaded to a conveyor belt. The flat conveyor belt is formed into a tube to carry the coal to the coal storage yard. The coal is stacked onto a pile over underground hoppers. From these hoppers, coal is fed onto a conveyor belt for delivery into the plant where it is stored in a bunker for each boiler. The ash produced from the fuel combustion and that is collected by the boiler baghouse is collected and pneumatically conveyed to a storage silo. The ash is unloaded from the silos into trucks. The facility also maintains a 340 brake horsepower emergency diesel water pump for fire control purposes.

The facility is a Title V major source of PM-10, SO_2, NO_x, CO, HCl, HF, and H_2SO_4. This source is located in an attainment area for all pollutants with the exception of ozone of which NOx and VOC are precursors, and is a PSD major source. The facility was previously permitted under a PSD Permit issued on December 23, 1986, and amended on July 26, 1999.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID (EU ID)	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Stack ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
1A	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	1A	001	PM	12/23/86 amended on 7/26/99
1B	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	1B	001	PM	12/23/86 amended on 7/26/99
1C	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	1C	001	PM	12/23/86 amended on 7/26/99
2A	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	2A	002	PM	12/23/86 amended on 7/26/99
2B	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	2B	002	PM	12/23/86 amended on 7/26/99

Emission Unit ID (EU ID)	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Stack ID	Pollutant Controlled	Applicable Permit Date
2C	Foster-Wheeler stoker boiler/1986	175,000 lbs steam/hour 200 mmBtu/hour heat input	Fabric filter baghouse: Wheelabrator-Frye MDL 168 Series 6P with a control efficiency of 99.1%	2C	002	PM	12/23/86 amended on 7/26/99
Coal Handling							
FS3	Coal unloading and stock out: unloading hopper, covered conveyor, stock out tube	600 tons coal/hour	Water spray/wet dust suppression	3	1-2A	PM	12/23/86 amended 7/26/99
1-2A	Boiler 1A coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	1-2A	1-2A	PM	12/23/86 amended 7/26/99
1-2B	Boiler 1B coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	1-2B	1-2B	PM	12/23/86 amended 7/26/99
1-2C	Boiler 1C coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	1-2C	1-2C	PM	12/23/86 amended 7/26/99
2-2A	Boiler 2A coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	2-2A	2-2A	PM	12/23/86 amended 7/26/99
2-2B	Boiler 2B coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	2-2B	2-2B	PM	12/23/86 amended 7/26/99
2-2C	Boiler 2C coal storage bunker	270 tons coal/hour	Fabric filter baghouse: Dalamatic DLMV15	2-2C	2-2C	PM	12/23/86 amended 7/26/99
Unit 1 Ash System (total system rating of 4 tons of ash/hour)							
1-3	Storage Silo		Bagfilter: A-S-H Binvent	1-3A	1-3A	PM	12/23/86 amended 7/26/99

Emission Unit ID (EU ID)	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Stack ID	Pollutant Controlled	Applicable Permit Date
1-3	Vacuum pump		Filter: In line cartridge filter Cyclone: A-S-H Co. T-42 primary collector Bag filter: A-S-H Co. T-42 w/Micropulsair Mdl 42-8-18" hg	1-3B 1-3E 1-3F	1-3B	PM	12/23/86 amended 7/26/99
1-3	Vacuum pump		Filter: In line cartridge filter Cyclone: A-S-H Co. T-42 primary collector Bag filter: A-S-H Co. T-42 w/Micropulsair Mdl 42-8-18" hg	1-3C 1-3E 1-3F	1-3C	PM	12/23/86 amended 7/26/99
1-3	Wet unloader		Pugmill: A-S-H C-40 pugmill	1-3D	1-3D	PM	12/23/86 amended 7/26/99
Unit 2 Ash System (total system rating of 4 tons of ash/hour)							
2-3	Storage Silo		Bagfilter: A-S-H Binvent	2-3A	2-3A	PM	12/23/86 amended 7/26/99
2-3	Vacuum pump		Filter: In line cartridge filter Cyclone: A-S-H Co. T-42 primary collector Bag filter: A-S-H Co. T-42 w/Micropulsair Mdl 42-8-18" hg	2-3B 2-3E 2-3F	2-3B	PM	12/23/86 amended 7/26/99
2-3	Vacuum pump		Filter: In line cartridge filter Cyclone: A-S-H Co. T-42 primary collector Bag filter: A-S-H Co. T-42 w/Micropulsair Mdl 42-8-18" hg	2-3C 2-3E 2-3F	2-3C	PM	12/23/86 amended 7/26/99
2-3	Wet unloader		Pugmill: A-S-H C-40 pugmill	2-3D	2-3D	PM	12/23/86 amended 7/26/99

EMISSIONS INVENTORY

A copy of the 2004 annual emission update is attached. Emissions are summarized in the following tables:

2004 Actual Emissions

	2004 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
Facility-wide Total	3.04	115.89	4,820.51	7.19	1,499.66

2004 Facility Hazardous Air Pollutant Emissions

Pollutant	2004 Hazardous Air Pollutant Emission in Tons/Yr
HF	26.9
HCl	211.4
Sulfuric Acid Mist (H_2SO_4)	13.2

EMISSION UNIT APPLICABLE REQUIREMENTS

The following limitations are derived from the PSD permit issued December 23, 1986, and amended on July 26, 1999.

Specific Conditions:

4. Annual throughput of coal not to exceed 430,992 tons.
(9 VAC 5-170-160)

5. Emission limitations for each boiler (1A, 1B, 1C, 2A, 2B, and 2C):

Pollutant	lbs/mmBtu	lbs/hr	tpy
PM	0.03	5.9	26.0
SO_2	1.52	304.0	1331.5
NO_x	0.60	120.0	525.6
CO	0.60	120.0	525.6
VOC	0.003	0.6	2.5

(9 VAC 5-50-280)

6. Emissions from coal unloading not to exceed:

   PM 0.22 lbs/hr 0.65 tons/yr
   (9 VAC 5-50-280)

7. Emissions from the operation of the ash silos (2 units) not to exceed:

   PM 0.07 lbs/hr/silo 0.3 tons/yr per silo
   (9 VAC 5-50-280)

8. Emissions from the operation of each of the 6 coal bunkers not to exceed the following:
   PM 0.005 lbs/hr 0.009 tons/yr
   (9 VAC 5-50-280)

9. PM controlled by baghouse rated at 99.1% control efficiency for each boiler (1A, 1B, 1C, 2A, 2B, and 2C).
   (9 VAC 5-50-280)

10. PM from unloading hopper, stock out discharge and live pile (FS3) controlled by water spray.
    (9 VAC 5-50-280)

11. PM from each ash handling system (1-3 and 2-3) controlled by primary multi cyclone and 2 bag filters. PM from 6 coal bunkers (1-2A, 1-2B, 1-2C, 2-2A, 2-2B, and 2-2C) controlled by fabric filters.
    (9 VAC 5-50-280)

12. Approved fuel for 1A, 1B, 1C, 2A, 2B, and 2C is bituminous coal.
    (9 VAC 5-80-20)

13. Sulfur content and ash content of coal not to exceed 0.95 % and 11.0% by weight, respectively. Maintain records for at least two years.
    (9 VAC 5-50-280 and 9 VAC 5-170-160)

General Conditions:

8. Training and certification for the operation of control equipment.
   (9 VAC 5-170-160)

In addition to the limitations from this permit, the facility must also comply with emission limitations in 40 CFR 60 NSPS Db. The following list highlights applicable requirements from Db.

60.43b(f) ...no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil or natural gas shall cause to be discharged into the atmosphere any gases that exhibit greater than 20% opacity (6 minute average) except for one 6 minute period per hour of not more than 27% opacity.

60.43b(g) The particulate matter and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction.

60.44b(a)(3)(ii)...no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil or natural gas shall cause to be discharged into the atmosphere...any gases that contain NOx in excess of 0.6 lbs/mmBtu.

60.44b(h) NOx standards under this section apply at all times including periods of startup, shutdown, or malfunction.

60.44b(i) ...compliance with the emission limits under this section is determined on a 30 day rolling average basis.

60.46b(a) The particulate matter emission standards and opacity limits ... apply at all times except during periods of startup, shutdown, or malfunction. The NOx standards ... apply at all times.

60.49b(h)(3) Excess emissions of opacity are defined as all 6-minute periods during which the average opacity exceeds the standard.

60.49b(h)(4) NOx excess emissions are defined as any calculated 30-day rolling average NOx emission rate which exceeds the standard.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-100 "Monitoring" This standard is applicable to all CEMs and COMs. However, the requirements of 40 CFR 60 Appendices B and F are more stringent. Therefore, the requirements of 9 VAC 5-50-100 will not be included in the permit. However, the citation will be included with monitoring conditions' citation listings for clarity and completeness.

Monitoring

The following conditions have been taken from the specific conditions of the PSD permit issued December 23, 1986, and amended on July 26, 1999.

16. Opacity and NOx monitors required.
(9 VAC 5-50-410 and 40 CFR 60 Subpart Db)

The following requirements stem from 40 CFR 60 Subpart Db:

60.41b Steam generating unit operating day: …means a 24 hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit.

It is not necessary for fuel to be combusted continuously for the entire 24 hour period.

(This definition is necessary to clarify the extent of monitoring required by the regulation. The current PSD permit does not go into any detail regarding the requirements of Db.)

60.46b(e)(2) ...shall determine compliance with the NOx standards on a continuous basis through the use of a 30 day rolling average emission rate. A new 30 day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

60.48b(a) ...shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

60.48b(b)(1) ...shall install calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emission discharged to the atmosphere.

60.48b(c) ...(the NOx monitor) shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

60.48b(d) The 1 hour average NOx rates measured by the NOx monitor and required under 60.13 (h) shall be expressed in lbs/million Btu heat input and shall be used to calculate the average emission rates. The 1-hour averages shall be calculated using the data points required under 60.13 (b). At least 2 data points must be used to calculate each 1-hour average.

60.48b(e) The procedures under 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

60.48b(e)(1) The span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

60.48b(e)(2) The span value for nitrogen oxides is 1000 for coal.

60.48b(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7a, or other approved reference methods to provide emission data for a minimum of 75% of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

THE FOLLOWING MONITORING REQUIREMENTS ARE TAKEN FROM 60.13, "MONITORING

REQUIREMENTS"

60.13(a) ...all continuous monitoring systems required under applicable subparts shall be subject to the provision of this section upon promulgation of performance specifications for continuous monitoring systems under Appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, Appendix F to this part.

60.13(d)(1) Owners and operators of all continuous emission monitoring systems ... shall check the zero (or low level value between 0 and 20% of span value) and span (50 to 100% of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specification in Appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emission, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 % opacity.

60.13(d)(2) For opacity measurements, minimum procedures shall include a method for producing a simulated zero opacity condition and upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

60.13(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required above, all CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) For opacity, shall complete a minimum of once cycle of sampling and analyzing for each successive 10 second period and one cycle of data recording for each successive 6-minute period.
(2) All continuous monitoring systems except opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

60.13(f) Devices to be installed to get representative measurements of emissions. Must use procedures for location of systems in the applicable PS of Appendix B.

60.13(h) For COMS, must reduce all data to 6-minute averages and for CEMS to 1-hour averages. 6-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For CEMS, 1-hour averages shall be

computed from 4 or more data points equally spaced over each 1-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.

(The portion of this requirement requiring 4 data points for each hour is overridden by the requirement for only 2 data points for each hour in the NSPS 60.48b(d).)

Periodic Monitoring

The large emitting units at this facility are each of the 6 boilers. These boilers have monitors for NOx and opacity. These monitors meet the requirements of periodic monitoring for these pollutants. The facility will use the pressure drop across each of the baghouses as a surrogate parameter for particulate matter emissions and for control efficiency. The acceptable pressure drop may not exceed 10 inches water column. Pressure drops exceeding 10 inches water column will be considered indicative of a compliance problem. A lower limit to the pressure drop was not included in the permit since the boilers can operate at low load that produces a small pressure drop across the baghouse. Should a failure or malfunction occur which causes a low pressure drop across the baghouse, the opacity monitoring system would show a violation. The pressure drop will be measured and recorded once every twelve hours. This permit lays out the steps for determining if the deviation from the acceptable limit listed in the permit is a violation of the emission limit.

The SO_2 emission limitations are monitored via record keeping of sulfur content in the fuel. This is also an acceptable method for periodic monitoring of the SO_2 standards. The VOC and CO emissions from these boilers are not measured directly. Periodic monitoring for these limitations will be the requirement for use of good operational practices and good maintenance practices, as well as the requirement to keep maintenance records.

Additionally, the facility will be required to test for PM_{10}, VOC, CO, and SO_2 once per permit term. This frequency of testing was chosen based on the information in previous tests that showed the boilers operated well below their standards.

The facility also has many small emissions units: the coal bunkers (1-2A through 2-2C), the ash systems (1-3 and 2-3), and the coal unloading and stock out area (FS3). Each of these emissions units is subject to particulate and opacity limits and has control requirements. The control requirements consist of particulate filters, cyclones, a pugmill, and the use of wet suppression. The facility will be required to observe each discharge monthly for a brief period of time to determine if any visible emissions are present. If any visible emissions are present, the facility will be required to perform maintenance. If maintenance does not alleviate the visible emissions, the permittee will be required to perform a Method 9 to determine compliance with the opacity limits. No testing for particulate is deemed necessary for periodic monitoring because of the small size of these emission points. Each discharge is permitted for well below one ton of particulate a year, and therefore the expense of particulate testing would not be appropriate.

For the particulate filters and cyclones, periodic monitoring also will consist of requiring good maintenance practices, and record keeping requirements to document maintenance. Additionally, for the pugmill and the wet suppression, consistent use of these work practices will constitute periodic

monitoring since use of the pugmill and use of the sprays ensure the emissions units meet their standards.

The facility will be required to keep records of times when these work practices were not used, of maintenance on the control equipment, and of the monthly visible emission observances.

Emission Limitation Demonstration:

Condition III.A.1. in the Title V permit contains hourly and annual emission limitations for boilers 1A, 1B, 1C, 2A, 2B, and 2C. The following demonstrates the equations used to determine the emission limitations. This demonstration includes the emission factors and the maximum capacities of the equipment. The results of the calculations show that the PM_{10}, CO, VOC, and NOx emissions are limited by the maximum rated capacity of the boilers. The results also show that the SO_2 emissions are limited by sulfur content and the maximum rated capacity of the boilers. Therefore, as long as the size of the boilers does not change and the sulfur content conditions are not violated, the source should not exceed the emissions limitations.

GIVEN: *Each boiler rated at 200 mmBtu/hr.
*Permit limits sulfur in coal to 0.95% by weight.
*Average BTU value of coal is 12,500 Btu/lb

EFs:

0.6 lbs/mmbtu CO: BACT determination and manufacturer's guarantee (has also been stack tested)
0.003 lbs/mmbtu VOC: State BACT and manufacturer's guarantee (has also been stack tested)
0.03 lbs/mmbtu PM_{10}: BACT determination confirmed via stack testing
0.6 lbs/mmbtu NOx: BACT determination confirmed via direct compliance monitor
1.52 lbs/mmbtu SO_2: BACT determination confirmed via sulfur monitoring and testing

FORMULA: EF x rating = hourly emissions
Hourly emissions x 8760 hrs/year x 1 ton/2000 lbs = annual emissions

Pollutant	Hourly Emissions Formula	Hourly Emission
PM	.03 lbs/mmbtu(200 mmbtu/hr)	6.0 lbs/hr
SO2	.0095 lb S/lb coal(200 mmbtu/hr)(2 lb SO2/lb S)/(.0125 mmbtu/lb coal)	304.0 lbs/hr
NOx	0.6 lbs/mmbtu(200 mmbtu/hr)	120.0 lbs/hr
CO	0.6 lbs/mmbtu(200 mmbtu/hr)	120.0 lbs/hr
VOC	.003 lbs/mmbtu(200 mmbtu/hr)	0.6 lbs/hr

Pollutant	Annual Emissions Formula	Annual Facility Emissions
PM	6.0 lbs/hr(8760 hrs/year)(1 ton/2000 lbs)	26.3 tpy
SO2	304.0 lbs/hr(8760 hrs/year)(1 ton/2000 lbs)	1331.5 tpy
NOx	120.0 lbs/hr(8760 hrs/year)(1 ton/2000 lbs)	525.6 tpy
CO	120.0 lbs/hr(8760 hrs/year)(1 ton/2000 lbs)	525.6 tpy
VOC	0.6 lbs/hr(8760 hrs/year)(1 ton/2000 lbs)	2.6 tpy

The facility will be required to keep records of the equations used and the pollutant specific emission factors used to calculate these hourly and annual emissions. These limitations will be part of the monitoring and record keeping sections of the Title V permit.

Recordkeeping

The following limitations are derived from the PSD permit issued December 23, 1986, and amended on July 26, 1999.

General Condition 9. Written operating procedures for control equipment. Maintenance schedule required. Records of service and maintenance. (9 VAC 5-170-160)

The following requirements stem from 40 CFR 60, Subpart Db:

60.49b(d) Shall record and maintain records of the amount of fuel combusted during each day and calculate the annual capacity factor for coal each calendar quarter. The annual capacity factor is determined on a 12 month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

60.49b(f) Shall maintain records of opacity.

60.49b(g) Shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date
(2) Average hourly measured nitrogen oxides emission rates in lbs/million btu.
(3) 30 day average nitrogen oxides emission rates in lbs/million btu calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.
(4) ID of days when the calculated 30 day average of NOx are in excess of the standard, with reasons for each excess emissions as well as a description of corrective actions taken.

(5) ID of days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.
(6) ID of times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.
(7) ID of F factor used for calculations, method of determination, and type of fuel combusted.
(8) ID of times when pollutant concentration exceeded full span of the continuous monitoring system.
(9) Description of modifications to CEMS that could affect the ability of the CEM to comply with PS 2 or 3.
(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1.

60.49b(o) All records shall be maintained by owner for period for 2 years following the date of such record.

In addition to the record keeping requirements from the PSD permit and the NSPS Db, the facility will be required to measure pressure drop once every twelve hours across each of the 6 baghouses. The purpose for this monitoring is to help satisfy the periodic monitoring requirements of the Title V regulations and to ensure compliance with the particulate matter standard from each boiler and with the control efficiency for each baghouse. If the pressure drop deviates from the range listed in the permit, the facility will be required to keep records of actions taken. Also, the facility will be required to keep records of maintenance performed on each of the cyclones and baghouses associated with equipment other than boilers as well as the pollutant specific emission factors and equations used to calculate emissions from the boilers. The facility will be required to keep records of times when the pugmill was not in use or malfunctioned during ash loading operations and of times when wet suppression was not used on the coal piles. The facility will be required to keep on hand the test reports for the tests required by this permit and records of the monthly observations of small particulate sources. All the record keeping requirements described in this paragraph are for the purpose of ensuring adequate periodic monitoring.

Testing

The following limitations are derived from the PSD permit issued December 23, 1986, and amended July 26, 1999.

Specific Condition 14. Provision for test ports.
(9 VAC 5-50-30 F)

General Condition 5. Designed and constructed to allow emissions testing.
(9 VAC 5-50-30 and 9 VAC 5-60-30)

The following requirements stem from 40 CFR 60 Subpart Db:

60.46b(d)(2)(i) To determine compliance with the particulate matter emission limits, Method 5 shall be used.

60.46b(d)(7) Method 9 is used for determining the opacity of stack emissions.

60.46b(e)(2) ...shall determine compliance with the nitrogen oxides emission standards on a continuous basis through the use of a 30 day rolling average emission rate. A new 30 day rolling average emission rate is calculated each steam generating unit operating day as the average of all the hourly nitrogen oxides emission data for the preceding 30 steam generating unit operating days.

The Title V permit also contains a requirement for testing PM_{10}, CO, SO_2, and VOC emissions once per permit term. The facility may test one stack during any permit term. The three boilers exhausting to that stack must be running at a minimum of 80% of maximum rated capacity.

Reporting

The following requirements stem from 40 CFR 60, Subpart Db:

60.49b(h) Must submit excess emission reports of opacity for any calendar quarter during which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, shall submit a report semiannually stating no excess emissions occurred.

60.49b(h)(4)(i) Shall submit a quarterly report for NOx containing information in 49b(g). All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

60.49b(v) May submit electronic quarterly reports for NOx and opacity in lieu of submitting written reports. The format of each quarterly electronic report shall be coordinated with the Administrator. The electronic reports shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement, indicating whether compliance with the applicable emission standard and minimum data requirements were achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the Administrator to obtain their agreement to submit reports in this alternative format.

In addition to the requirements from Subpart Db and the PSD permit, the Title V permit will contain

reporting requirements stemming from 9 VAC 5-80-110 F.2.a.:

> ...the permit shall contain terms and conditions setting out all applicable reporting requirements and requiring the following:
>
> (a) Submittal of reports of any required monitoring at least every six months. All instances of deviations from permit requirements must be clearly identified in such reports. All reports must be certified by a responsible official...

These requirements will be the reporting of instances where pressure drop across the baghouse was not in the acceptable range, corresponding actions taken, instances where the pugmill was malfunctioning or where dust suppression was not adequate in coal handling operations, instances where the sulfur and ash content of the fuel exceeded the allowable limits, results of the once per permit term required stack tests, and results of all monthly visible emissions evaluations. At the request of the permittee, the reporting requirements frequency has been changed to quarterly to coincide with other quarterly reporting requirements, mainly from NSPS.

Streamlined, Obsolete, and Redundant Requirements

The following conditions from the December 23, 1986, permit (amended on July 26, 1999) are not included in the TV permit. The reason for not including each condition is listed beside each condition number.

Specific Conditions:

1,2,&3: Location, operation, and equipment will be listed in TV permit as introductory information.

15: Stack tests have been performed and show compliance with standards.

17: 40 CFR 60 Db reporting and record keeping will be spelled out in the Title V permit. However, a condition under Limitations in the Title V permit will state that the facility must operate in accordance with Subpart Db.

18: The facility does not have a dead coal storage pile (coal stored longer than 90 days). Therefore, this is an invalid permit condition. Construction or creation of a dead coal storage pile would create a new emissions unit that may need a permit.

General Conditions:

1,2,3,&4: All construction notifications have been received. Facility has tested stacks as well as emissions monitors.

6: COMS/CEMS have been installed and tested. All testing is completed.

7: The Title V regulation requires record keeping for 5 years, which is more stringent than the permit requirement and NSPS requirement of 2 years.

13, 17, 18, & 19: These conditions are listed as general conditions in the Title V permit.

10, 11, 12, & 16: Facility has started operation; therefore, these conditions no longer apply.

The following requirements of Subpart Db are not included in the TV permit. Reasons for exclusion follow each requirement. Any conditions that have been streamlined out of the TV permit will have that streamlined citation listed in the appropriate condition's citation listing.

60.43b(a)(1)(i) ...shall cause to be discharged into the atmosphere from that affected facility any gases that contain particulate matter in excess of 0.05 lb/million Btu if the affected facility combusts only coal.

(The BACT determination of 0.03 lbs/million BTU is more stringent and therefore takes the place of this requirement. The NSPS requirement will be streamlined out of the Title V permit.)

60.46b(e)(1) For the initial compliance test, NOx from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30 day average emission rate is used to determine compliance with the NOx emission standards. The 30 day average emission rate is calculated as the average of all hourly emissions data record by the monitoring system during the 30 day test period.

(This condition will not be included in the permit since the initial compliance test has already been conducted in accordance with this condition and showed that the facility met the standard.)

60.49b(a)(1) Initial notification including design heat input capacity, identification of fuels combusted.

60.49b(a)(3) Annual capacity factor.

60.49b(b) Submittal of initial performance test data and performance evaluations of the CEMS.

(These 3 conditions listed above will not be included since these notifications and test data have been sent in and approved.)

OTHER APPLICABLE REQUIREMENTS

The following limitation is derived from the PSD permit issued December 23, 1986 and amended July 26, 1999. This limit shall be in the TV permit since it is part of a federally enforceable permit.

General Condition 15. Operation in compliance with Toxics Rule
(9 VAC 5-50-320)

FUTURE APPLICABLE REQUIREMENTS - The facility is a major source of HAPs. A MACT standard has either been proposed or promulgated for coal fired boilers as of this date. However, the facility is exempt from this MACT requirement at this time. The facility will likely be affected by the recently promulgated Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR) in the future. No other future applicable requirements have been identified for this

source.

INAPPLICABLE REQUIREMENTS - The facility is not subject to the SO_2 requirements of Db because the construction of the facility commenced after June 19, 1984, but before June 19, 1986. The following citations show this exemption.

60.40b(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 mmBtu/hour.

60.40b(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification or reconstruction after **June 19, 1984, but on or before June 19, 1986**, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 100 and 250 mmBtu/hour inclusive, are subject to the **particulate matter and nitrogen oxides** standards under this subpart.

Therefore, the facility is not subject to the SO_2 requirements for this subpart. The SO_2 requirements in the PSD permit are derived solely from BACT and NAAQS considerations.

In addition, 40 CFR 63 Subpart DDDDD does not apply to the permittee since fossil fuel-fired units that cogenerate steam and electricity, and supply more than one-third of its potential electric output capacity, and more than 25 megawatts electrical output to any utility power distribution system for sale are exempt from the provisions of this subpart. This exemption is outlined specifically in 40 CFR 63.7491.

COMPLIANCE PLAN - No compliance plan is required for this facility since it is currently in compliance with all applicable regulations.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

The following Virginia Administrative Codes that have generally applicable requirements have been determined to be applicable:

9 VAC 5-50-80 "New Source Standards for Visible Emissions"
This standard is applicable to all sources other than boilers 1A, 1B, 1C, 2A, 2B, and 2C. This standard states that no unit may emit more than 20% opacity except for one 6 minute period in any one hour of not more than 30% opacity as measured by Method 9. The units with this requirement have been listed under the "Limitations" portion of the Title V permit.

9 VAC 5-50-90 "Standard for Fugitive Dust Emissions"

This standard is applicable to all fugitive discharges, in particular the transport, storage, and handling of the coal. The facility is required to use wet suppression when moving coal from the coal pile, which supports this requirement.

9 VAC 5-50-380 "Facility and Control Equipment Maintenance or Malfunction"
References 9 VAC 5-20-180, which states all equipment must be kept in good working order and that notification requirements apply if equipment is down for more than one hour.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit applications has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cites the Article that follows:
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:
9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the section that follows:
9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5-50-310, Odorous Emissions
9 VAC 5-50-320, Toxic Pollutants

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
1-4	Turbine lube oil tank vent	Emissions level 9 VAC 5-80-720 B	VOC	n/a
2-4	Turbine lube oil tank vent	Emissions level 9 VAC 5-80-720 B	VOC	n/a
1-5	Cooling tower	Emissions level 9 VAC 5-80-720 B	PM	n/a
2-5	Cooling tower	Emissions level 9 VAC 5-80-720 B	PM	n/a
6	Diesel fuel storage tank	Emissions level 9 VAC 5-80-720 B	VOC	n/a
SK	Parts cleaner	Named activity 9 VAC 5-80-720 A 24		35 gals <0.07 tpy
5	Emergency diesel power fire pumps	Size 9 VAC 5-80-720 C		340 BHP
7	Oil/Water separator	Named activity 9 VAC 5-80-720 A 41		Emergency use only < 5.0 tpy

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

COMPLIANCE ASSURANCE MONITORING PLAN (CAM)

See attached CAM plan for control of PM emissions from the boilers. The CAM plan becomes an applicable requirement of the Title V permit by virtue of its inclusion in this Statement of Basis. DEQ has approved the attached CAM plan and has determined that it meets the requirements for CAM submittals as outlined in Chapter 10 of the DEQ Title V Permit Manual (modified December 6, 2005).

CONFIDENTIAL INFORMATION

The facility did not request that any portion of the Title V permit be made confidential.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Norfolk *Virginian-Pilot* from April 13, 2006, to May 13, 2006.